Acne Telangiectasia

- patients wash face with Comedogenic soap
- Closed comedones
- (tt) wash only once or twice a day with non comedogenic soap.

Solid facial edema (Morbihan's disease)

Soft tissue Swelling

* unusual, disfiguring complication of AcV

(Cp): . distortion of midline face, cheeks (dt) Soft tissue swelling
- woody non scaling induration may be accompanied by erythema
- Impaired lymphatic drainage, fibrosis.

- Fluctuations in severity are common
- doesn't Resolve spontaneously XXX

(Rx) ① isotretinoin (0.2-1 mg/kg/day) alone or in combination with
② Ketotifen (1-2 mg/day)
or ③ prednisone (10-30 mg/day) for 4-5 months

Acne Aestivalis (Mallorca Acne)

جزيرة في اسبانيا (المتوسط)

- Rare
- females 25-40y
- Starts in spring, Resolves by fall
- Small papules on cheeks, upper body
- Comedones, pustules → are sparse or absent (No)
  No ✗ ✗ No
- (Rx) Retinoic acid → one help

Papules → only

acne due to external chemical exposure

(Acne venenata) — Es poisonous acne

Most of chemicals induce acne through follicular hyperkeratosis

(1) * Acne cosmetica → Many Make-up products → especially those containing (lanolin, petrolatum, oleic acid) are comedogenic

- Closed comedones + papules, pustules on skin, cheeks

(2) * Pomade acne →

- In Blacks, males
- dt application of various greases, oils to scalp hair, face as a grooming aid
- Common on forehead, Temples

(3) * occupational acne dt oils, Tars, and crude coal tar

- cutting oils
- lubricating oils
- heavy tar
- coal tar, asbestos oils

Coal tar → used in psoriasis → Vitiligo → exposure sunlight UVR etc.

- Common on face, forms
- if not Rx properly → coal tar can develop into Skin cancer
- forming black plug mixed with dead skin cells, keratin

(4) * chloracne (1) dt exposure to chlorinated aromatic hydrocarbons

(ex) → chlordiphenyloxides

acne
monomorphic
acne polymorphic

③ Polyhalogenated hydrocarbons (dioxin)

(Sites): ① malar, retroauricular, mandibular, Regions of head, Neck
② axilla, Scrotum

(C/P): Comedones, Folliculitis, Pustules, cysts
heal with significant scarring

(Rx of chloracne): ① Removal of chemical agents at time of exposure
② Topical Retinoids

(⑤ acne detergicans)

* Patients wash face with comedogenic soap containing hexachlorophene
* closed comedones, papules, pustules
(* Rx) → wash only once or twice a day with non comedogenic soap

(الغازلة)

(G+ve folliculitis الناتجة بسبب) (G-ve folliculitis)

* (Etiology)
is complication of prolonged Rx of A.V with (Broad spectrum) antibiotics
or Rosacea

(Cultures of lesions) → E.coli
Klebsiella
Proteus
Pseudomonas

(C-P): anterior nares Colonized
: superficial (Pustules) grouped around the anterior nares
or nodular cystic lesions

- upper lip
  Chin
  Jawline

① current AB should be discontinued ✗

② appropiate (G-ve antibiotic ✓)
Oral Trimethoprim 200-300mg twice daily

③ isotretinoin used for resistant cases

- SAPHO
- PAPA
- HAIR-AN → Acanthosis
  - hyperandrogenism
  - insulin Resistance

Treatment :

1. Bed rest & hospitalization
2. Oral steroid (40-60mg/d) decreasing to zero.
3. Isotritinoin (systemic) 4-6w
4. NSAID

6) *Pyoderma faciale* :

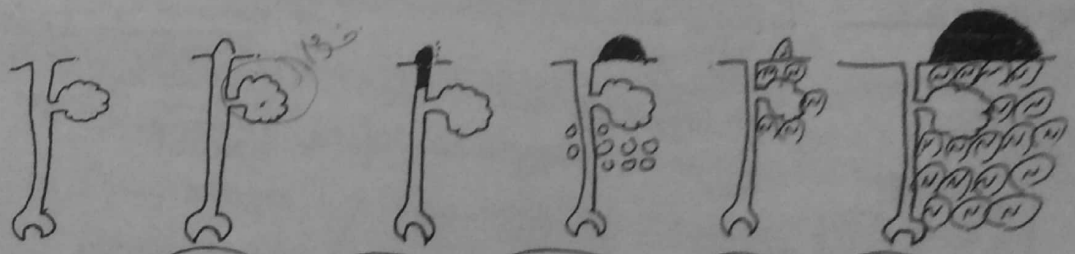
- More common in female, post-adolescent (30-40y).
- Site : face
- There is a suddenly erupted purulent nodulocystic lesions affecting the face, back usually free.

7) *Gram –ve fulliculitis* :

- It is characterized by superficial pustules or nodulo-cystic lesions affecting face (around the anterior nostril), back & arms.
- Culture of the lesion reveals E coli, klebsiella, proteus or pseudomonas.
- ttt :
  - Isotritinoin.
  - Ampicillin 1gm/d.

Diagnosis :

1. ***History & examination.***
2. ***Histopathology rarely required.***



Comedo :	White comedo	Black comedo	Papules	Pustules	Nodules
Composed of keratin, sebum, microorganism & hair fragments	Inactive melanocyte in the infandibulum with low melanin	Enzymatic active melanocytes yield melanin in the outer portion	Peri follicular lymphocytic infiltrate	Superficial peri follicular small aggregation of neutrophils	Perifollicular large & deep aggregation of neutrophil

3. **Endocrinal investigations :**

- Indication: female with
  1. Severe acne resistant to therapy.
  2. Facial hirsutesm.
  3. Infrequent menses.
  4. Polycystic ovaries proved by sonar.
- Measurement of serum androgen (free – total)

Treatment of acne vulgaris :

1) Very mild acne → antiseptic wash

If unsuccessful topical benzoyl peroxide

2) Mild acne → Benzoyl peroxide

If irritation occur → Topical antibiotic

if unsuccessful → topical tretinoin

3) Moderate acne → systemic antibiotic + topical therapy.

4) Severe/very sever acne → systemic isotritinoin.

[I] Topical treatment of acne vulgaris

(1) Benzoyl peroxide (panoxyl, akneroxide)

- Mechanism of action : Bacteriostatic & keratolytic.
- Disadvantages : * Skin irritation : peeling, itching, burning sensation ... + bleaching of cloths
- N.B. : Benzamycin = Benzoyl peroxide + erythromycin.

(2) Topical antibiotics :

- Clindamycin (Dalacin T) & erythromycin (Acnemycin).
- N.B. : Erythromycin + Zinc acetate = Acnebiotic

(3) Sulpher ppt 2% in calamine lotion

R/:

- Androgen [illegible] ← Hirsutism / A.A / Acne
- : ↳ U/S & hormonal Rx

4-8M

- Sebum → Isotretinoin If stop normal sebum product
- Ductal hyperplasia → keratolytics
- Bacteria → AB ← [illegible] / [illegible]

Rx of acne (1)

Rx — Assesment of Acne severity must done before Rx & This include

1. assessment Type of lesion → Comedonal / inflamatory / Mixed
2. Psychological assessment
3. presence of scaring

Drugs used in Rx of acne:

I. Topical

1. * Predominantly Anticomedonal:- → Retinoic acid 0.05% / Isotretinoin 0.05% / Adapalin / AZelaic acid / Tazarotin } Topical is Retoids + Azelaic acid
2. * predominantly Anti microbial
   1. * Topical AB → erythromycin / clindamycin / Tetracyclin / Erythromycin + Zinc → Acne hitx
   2. * Benzoyl peroxide
   3. * AZelaic acid
   * Benzamycin = Benzoyl peroxide + erythromycin
3. * Predominantly Anti inflamatory
   * Adapalene
   * Topical Antibiotic

II. oral

1. * Antibiotics → Tetracyclin / Doxycyclin / Erythromycin / Minocyclin / Co trimoxazole
2. * Hormonal Rx → estrogen + prednisolone / Cyproterone acetate / spironolacton / ethinyl estradiol
3. * Systemic Retinoids
4. * Steroid

III. other

- LASER
- Liquid NiTrogen
- Intralesional steroid
- UVR

Mild acne → require topical Therapy only

* Predominantly Non inflamatory "comedones"
  - Best Combination bet. Benzoyl peroxid + Retinoic acid / Adapalin / TaZarotine
  - Retinoic acid
  - Adapalene
  - TaZarotine
  - comidone extractor
  - AHA
* Predominantly Inflamatory lesion "papule & pustules"
  - Best Combination bet B. P + AB e.g "clindamycin or erythromycin" (Benzamycin)
  - AZelaic acid
  - Adapalene

Scanned by CamScanner

Topical Retinoic acid:- 0.025 %, 0.05 %, 0.1 %

* Comedolytic agents
* once daily
* Clinical improvement after 6 weeks
& Maximum in 3 - 4 months

Mechanism of action:-

↳ Bind to CRABP which transport RA to Nucleus
RA bind to nuclear RAR "retinoic Acid receptor"

⟶ ⊖ DNA proliferation

Theraputic effect of tretinoin:-

① Alter microenvironment of comidone
② Resolve mature Comedones
③ prevent new lesions
④ ↑ penetration of other drugs

* side effect:-

Irritation & photo sensitivity

Irritation minimized by:-

① gradually increasing dose & ↑ application period
② oily skin ⟶ use gel
dry skin ⟶ use cream

Photosensitivity minimized by:-

Sunscreen

Pt should advised that ⟶ exacerbation of acne during 1st week of therapy
d.t externalization of deep seated acne lesion

Acretin A 0.025 % cream
A 0.05 % cream
A 0.05 % Topical solution
A 0.025 gel

(4) Topical steroid + AB

- Short courses for inflammatory lesions.
- Intralesional steroid may be used in cystic acne.

(5) Retinoic acid (Retin A, Tridyna) :

- Mechanism of action : comedolytic, keratolytic, antibacterial & anti-inflammatory.
- It is applied nightly or every other night for 30-60 minutes.
- Disadvantages : irritation & photosensitivity.

(6) Adapalene 0.1% (Differin gel).

- A 3rd generation topical retinoid used in treating acne.
- It is more effective than tretinoin due to :
  a. More stable.
  b. Faster onset of action.
  c. Rapid anti-inflammatory effect.
  d. Less irritant.
  e. Better tolerated.
  f. once daily only

(7) Azelaic acid 20% (Skinoren) :

- A naturally occurring saturated dicarboxylic acid, containing 9 carbon atoms. It is derived from P.ovale.
- It has antiacne agent through :
  1. Normalization of the disturbed follicular keratinization.
  2. ↓ pigmentation.
  3. Strong antimicrobial.
  4. Anti-inflammatory (by decreasing) the release of ROS (reactive oxygen species) from neutrophils.
- Advantages of azelic acid:
  1. Less irritant.
  2. Does not stain clothes or bed-linen.

(8) Combination therapy : e.g benzyl peroxide + antibiotics.

P. acnes resistance : more to oral, Topical erythycin, clindamycin
less to tetracyclin, doxycyclin
Rare minocycline

to limit Resistance to antibiotics

① Combine topical Retenoids + antibiotic

② oral antibiotic → used for 3m (3m)
but 6-8w R → X

③ oral and Topical AB → not used as Monotherapy

④ Concurrent use of oral, Topical antibiotic should be avoided, particularly if chemically diffent
↑Risk of Bact. Resistance
no synergistic action.

⑤ avoid use Antibiotics for maintance
but use Topical Retenoids for maintainace

Erythycin + Zn acetate → ↓ Resistance

avoid use of similar oral, Topical antibiotic

Tetracyclines

- Indications in skin disease
- Mode of action
- Side effects.

① Indications in dermatology

① Acne
② Rosacea
③ Bullous dermatosis
④ Sarcoidosis
⑤ Kaposi's sarcoma — Tumor
⑥ Hid. suppurativa
⑦ PG — Neutrophilic
⑧ Sweet's syndrome — Neutrophilic
⑨ α_1 antitrypsin deficiency panniculitis
⑩ PLC (pityriasis lichenoides) · Hailey Hailey
⑪ Scleroderma — C.I

linear IgA, 2 BP, OH

② in non dermatology

① RA — Rheumatology
② scleroderma — Rheumatology
③ Cancer
④ CVS disease → Acute MI, abdominal aortic aneurysm
⑤ periodontitis

Mode of action

① Acne →
① ⊖ P. acne
② ⊖ neutrophil chemotaxis
③ ⊖ proinflammatory cytokines, MMP-9

② Rosacea
① ⊖ angiogenesis
② ✓
③ ✓

③ Bullous
① – X
② ✓ Neutrophils } 2, 3
③ ⊖ MMP-2, 9

④ cutaneous sarcoidosis
⊖ granuloma formation by ⊖ protein kinase C
① x
② ✓

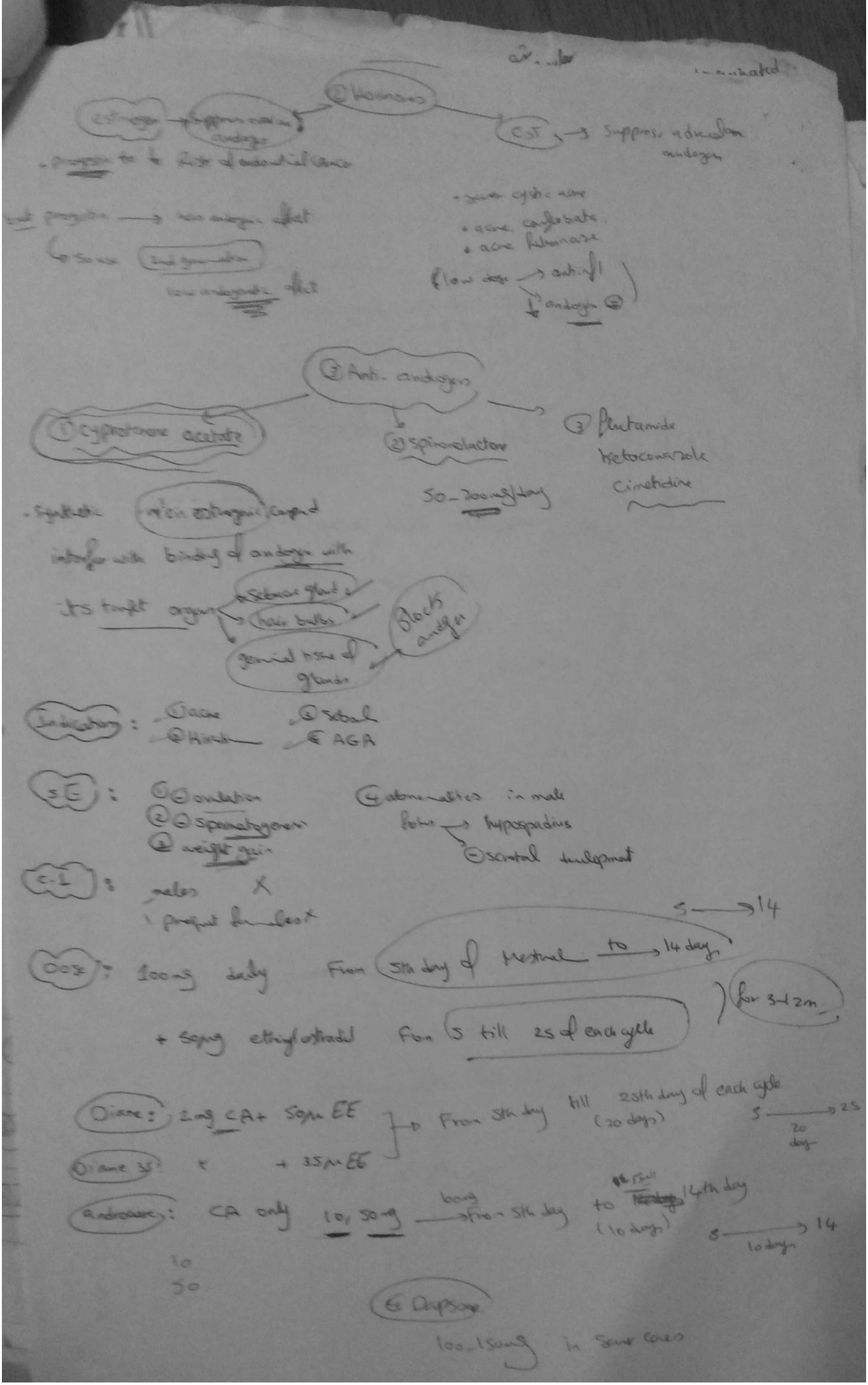
⑤ Neutrophilic dermatosis

S.E:

① low compliance
② GIT upset — on empty stomach
③ dairy products, iron limit its efficacy

Yellowish teeth discoloration → closure of epiphysis

C.I: preg, lactation, Renal, liver, children < 8 y



④ oral Retenoids

Isotretinoin

indications → ① Sever acne → nodulocystic acne

↳ Sever infl. acne with scaring

② Moderate acne → not Responding to Rx or Relapse after conventional combined oral and Topical antibiotics for 6m.

③ Sever psych-dist

④ G-ve folliculitis →

⑤ acne Conglobata

⑥ acne fulminans

⑦ Rosacea

⑧ H. Supp

⑨ Fordyce's disease

⑩ Pyodarma faciale.

Dose 0.5-1 mg/kg/day for 4-5 month

Total cumulative dose 120-150 mg/kg

1-5mg

very high dose 1.5 mg/kg/day

↳ in sever nodulocystic acne under supervision

Max dose → 1 mg/kg/day

↳ Short time (few weeks for marriage)

dose < 0.5 mg/kg → G-ve folliculitis ①, acne Rosacea ②, Hid. supp ③, adult onset of acne ⑤, Fordyce's disease ⑪

* Mechanism of action:

① ↓ sebum prod

② Normalize follicular epithelial keratinization

③ ↓ P. acn

④ anti-inflam → decrease/inhibit TLR

Block release of pro-inflam. cytokines

4/4

Monomorphic

Acneiform eruption

(5)

* Definition

papules, pustules Resembling AV but differ in:

① not confined to usual sites of A.V

② sudden onset

③ usually in patients passing age of acne

④ Resolve slowly with withdrawal of the cause

⑤ papulopustular or Nodular or cystic — usually lack No comedones — but A.V → comedones

may develops as a result of:

① infections

② Hormonal abnormalities

③ Metabolic "

④ genetic disorders

⑤ Drug Reaction

NO comedones

* Types

① EGFR - inhibit induced acne

② Tropical acne

③ Radiation "

④ Acne aestivalis

⑤ pseudoacne of Transverse nasal crease

⑥ Idiopathic facial aseptic granul

⑦ childhood flexural comedones

infect:

⑧ Acne Inversa

⑨ Pseudo folliculitis barbae

⑩ acne keloidalis

⑪ perioral de...

⑫ Drug induced acne

① EGF-R inhibitor induced eruption

Types

① Epidermal growth factor receptor (EGF-R) inhibitor induced eruption

EGF-R inhibitors are drugs used to Rx Solid Tumors → H,N SCC, lung, colon, breast Carcinoma

Pathogenesis: EGF-R is strongly expressed in → ① Keratinocytes
② cells of eccrine, apocrine glands

• Inhibition of these EGF-R → disturbs the normal differentiation and morphogenesis of hair follicles

(excessive follicular hyperkeratosis
Follicular plugging
growth of microorganisms in the dilated infundibula

C-P: monomorphs — Follicular papules, pustules

face, scalp, upper trunk — 1-3 w after starting Rx with EGF-R inhibitors

XX No Comedones

② Tropical acne (Hydration acne)

in Tropics, hot, humid weather

Markedly inflamed (Nodular, cystic lesions), Pustular acne (leaving scars)

on back, Shoulder, arms, buttocks, Thighs

Face is Spared

③ Radiation acne

Characterized by Comedo-like Papules occurring at sites of previous exposure to therapeutic ionizing Radiation.

(ionizing Rays → induce epithelial metaplasia of within the follicle → adherent hyperkeratotic plugs that are resistant to expression)

④ "Pseudoacne" of the transverse nasal crease

- Horizontal anatomical demarcation line found in lower ⅓ of nose which corresponds to the separation point between the alar cartilage & Triangular cartilage.
- Milia, Cysts, Comedones can line up along this fold.
- not normally Pesporsive
- arise during early childhood before puberty
- Surgical expression. Comedo extraction

⑤ Idiopathic facial aseptic granuloma

chronic
painless / solitary / nodule with an acneiform eruption
appears on cheeks of young children

Resolves spontaneously after average of 11m without Sq.

Hp → granulomatous infl. reponse, dermal lymphohistiocytic infiltrate with foreign body type giant cells

⑥ childhood flexural comedones

Discrete
double orifice / Comedones
localized to nuchae

(7) perioral dermatitis, periocular D (periorificial D)
اوالتهاب حول الفم

periorificial → periocular, perioral (lips)

* etiology
prolonged use of
1. Topical steroids (Flourinated steroids → high potent)
commensals
2. Demodex mites → (papule pustule follicle)
3. contact irritants or allergens
4. Moisturizers, make up
5. cleansers
6. Fluorinated compounds → fluorinated tooth paste.
7. food stuffs حاجة حراقة
8. sun light
9. ocps

* C.P
- Persistent papulopustules with erythematous base (around mouth, nose, may be the eyes)
- Characteristically → clear zone around vermillion border of the lips
- It may also include perinasal and perioral areas
(periocular dermatitis) → sparing area around orbit

* age: females 23 – 35 y.

* Rx
1. stop Topical steroids or other offending agent → stop cosmetics
2. oral Tetracyclin 1g/day or doxycycline, minocyclin, erythromycin, azithromycin for (4 – 6w)
Medicated soap
3. Topical pimecrolimus cream (Elidel) 1% (twice daily for 4 weeks)
4. Azelaic acid → irritant
5. Topical Metronidazole

(side note: topical steroids ... Tapering only)

(8) Drug induced acne (Acne Medicamentosa)

- abrupt
- monomorphous eruption of inflammatory papules, pustules
- Some drugs may induce AV or aggravate AV.

Common drugs

(1) Hormones / Steroids
1. Gonadotrophins
2. androgens
3. anabolic steroids (danazol, Testosterone)
4. oral, Topical steroids
5. progestins

(2) Halogens
1. Bromides
2. Iodides (KI)
3. Halothane

(3) antiepileptic drugs
1. Diphenylhydantoin (phenytoin)
2. phenobarbitone
3. Troxidone

(4) antiTubercul drugs
1. isoniazid
2. Rifampcin
(IH)

Others:

1. Lithium
2. EGFR inhibitors
3. Psolarenes (with PUVA)
4. Disulfiram
5. Quinine
6. chlorhydrate
7. cyanocobalamine
8. Sulphur
9. Thiouracil

Steroid induced acne

* Steroid induce keratinization in upper part of pilosebaceus duct
* Characterized by: → Sudden appearance of papules, pustules
  → with sparse or absent comedones ✗✗
  lesions are monomorphic than A.V
- mainly on → upper Trunk
  → arms
  Rarely on face ✗
- decrease with stoppage of drug.
- postinfl. hyperpigmentation is more common
- (dt) high dose of IV or oral CST
  → also result from inappropiate use of Topical CST on fa

TOLIP
ROYAL HOTELS
ALEXANDRIA
WHEN EXCELLENCE MEETS ELEGANCE

WAVES OF THE HARMONY
BAELBAK
BARLEY
JAZZ BAR
La Cucina
ELEMENTS THE QUINTESSENCE OF FLAVORS

Favre - Racouchot Syndrome

bilaterally usually

Symmetrical

Solar comedones — open / closed

with elastosis (Yellowish, Thickening, Furrows)

atrophy, wrinkles

may affect skin around eyes, Temples, cheeks

rarely Neck

dt combination of 1 Sun exposure < heavy smoking 2

Rx

Medical

1) Sun protection daily Free Sunscreen to exposed skin)
2) stop smoking
3) apply Retinoids cream
4) apply moisturizers for dry skin.

Surgical

1) comedo extraction
2) Cautery, diathermy
3) chemical peels
4) Dermabrasion
5) CO2 Laser

	acne vulgaris	Drug induced acne
	① polymorphic lesions ② Comedones Pustules papules Nodules cyst	monomorphic lesions pustules] only papules] No comedones Sudden appearance
② distribution	③ face, chest, shoulder, upper back	* upper Trunk, arms, rarely face
③ Resolution	④ post. infl. hyperpigmentation ↘ post. inf. scaring	* Post infl. hyperpigmentation is Common
④ Rx	⑤ Resolve with Rx according to severity, degree	* decrease by stopping of drug * Tretnoin
⑤ Etiology		* (dt) high dose of IV or oral CST or inappropiate use of Topical steroids on face

	A-4	
	comedones papules pustules nodules cysts	• Papules • pustules • or nodular or cystic lesion No comedones
② Sites	usual sites: face chest shoulder upper back	unusual sites in Females (not confined to usual sites of acne vulgaris)
③ age	* Age between 12-25 y	* passing this age * Adolescent onset
④ Rx	* Respond to Rx	* Resist to Rx, Resolve slowly with withdrawal of the cause
⑤ etiology	Pathogenic	* may develop as a result of ① infection ② hormonal abnormalities ③ Metabolic ④ genetic disorders ⑤ Drug Reaction
⑥ Types	* ① post adolescent acne * ② acne fulminans * ③ acne conglobata * ④ Gram folliculitis * ⑤ acne excoriee Neonatal infantile	* ① EGF-R * ② Radiation acne * ③ Tropical acne * ④ childhood Normal comedones * ⑤ Acne Aestivalis * ⑥ Bandaneal Transverse nasal crease ⑦ Propionibacterium ⑧ acne keloidalis ⑨ HS ⑩ Drug induced acne

acne

common

- Comedones, papules, pustules, nodules, cyst

② Site

- face, chest, shoulder, upper back

③ Hp

① Comedo → keratinous debris, microorganism, hair, sebum

② papules → lymphocytic perifollicular infiltrate

③ rupture of follicular wall → escape of contents → aggregation of Neutrophils → pustules, nodules

④ Pathogen

① ↑ sebum production
② proliferation of P. acne
③ inflammation
④ Follicular plugging (Retention hyperkeratosis)

antiacne agents

WHAT

uncommon, chronic inflammatory [illegible] disease

- Discrete Reddish papules
- No pustules ✗
- No comedones
- No telangiectasia ✗
- Temporary spontaneous remission usually in years, leaving pitted (small) scars

- face → upper lip, eyelid, cheeks
  Bilat, symmetrical

① Round granuloma with epithelioid cells, giant cells (Large Tubercle)

② central caseation Necrosis

③ Peripheral chronic inflammatory infiltrate

④ Later on → fibrosis

- No evidence support to tuberculosis (not respond to antitubercular drug) ✗
- may be Related to Rosacea ✗
- ?? granulomatous Reaction

- long term minocycline, tetracycline
- long term isotretinoin

Differential diagnosis of acne

Acne vulgaris (comedonal)

- **Closed**
  - Milia
  - Osteoma cutis
  - Sebaceous hyperplasia
  - Syringomas
  - Trichoepitheliomas*
- **Open**
  - Contact acne
  - Acne exacerbated by systemic corticosteroids & anabolic steroids
  - Favre-Racouchot disease
  - Nevus comedonicus

Acne vulgaris (inflammatory)

- Rosacea
- Perioral dermatitis
- Folliculitis-culture-negative (normal flora), staphylococcal, gram-negative, eosinophilic, Pityrosporum, Demodex
- Acne/acneiform eruptions due to topical or systemic corticosteroids**, anabolic steroids or other medications (e.g. lithium, EGFR inhibitors)
- Pseudofolliculitis barbae, acne keloidalis nuchae
- Furuncle / carbuncle
- Lupus miliaris disseminates faciei
- Neurotic excoriations / factitial

Neonatal acne (neonatal cephalic pustulosis)

- Sebaceous hyperplasia
- Milia
- Miliaria rubra (especially pustular variant)
- Candida infections

EGFR, epidermal growth factor receptor.
* Early or small-sized.
** Can also lead to rosacea-like picture.

Causes of comedones

① Dry developmental defect of Follicles → new comedones
nevoid Follicular epidermolytic hyperkeratosis

② genetically determined abnormality of pilosebaceous unit: AV
Familial comedonal (AD)

② Distub Follicular keratinization by exogen agents → Acne venenata
medicamentosa

② injury to pilosebaceous follicles by ionizing Radial (cobalt)

③ C.T abnormalities → Pseudoxanthoma elasticum
Necrobiosis lipoidica
lichen sclerosus et atrophicus
Solar elastosis (Favre-Racouchet)